# **Understanding the revisions for the Mathematics learning area - Primary**

**[Leyna Buller]:** Good afternoon everyone, and welcome to today's webinar, Understanding the Revisions to the Mathematics learning Area - Primary.

My name is Leyna Buller and I'm the Senior Policy and Strategic Advisor for the F–10 Revision Project at the Victorian Curriculum and Assessment Authority. It is my great pleasure to lead the webinar today. Before we begin, we'll start with an Acknowledgement of Country.

I would like to acknowledge the traditional custodians of the many lands across Victoria on which each of you are living, learning and working from today.

For myself and for those of us in Melbourne metropolitan area, we acknowledge the traditional custodians of the Kulin Nations.

When acknowledging Country, we recognise Aboriginal and Torres Strait Islander Peoples’ spiritual and cultural connection to country and place, and acknowledge their continued care to the lands and waterways over generations while celebrating the continuation of a living culture that has a unique role in this region.

I would like to pay my respects to Elders past, present, and emerging for they hold the memories, traditions, culture, and hopes of the Aboriginal and Torres Strait Islander Peoples across the nation and hope they will walk with us on our journey.

Before we begin the presentation, I'd like to thank you for your attendance today. It is a pleasure to virtually see so many of you. We are excited to share with you the Victorian Curriculum F-10 Mathematics Version 2.0, but also want to acknowledge your very busy schedule, so thank you for carving out some time for this.

Before progressing through today's presentation, I will briefly go through some housekeeping. Please note that the chat function is only being used to share relevant information and links from the VCAA. You'll notice that there is a Q & A box has been set up, so please use this to put your questions in. When you use the Q & A box, please make sure you select all presenters so they can all see your questions as they come in as some will be more pertinent for some presenters than others.

We will answer questions in a couple of ways. First, we may directly type a response into the Q & A box, which all participants will be able to see. Secondly, we will have dedicated Q & A time at the end of the presentation where we will address as many questions as time allows.

Any questions we haven't responded to today will be addressed in an FAQ posted on our website after the conclusion of all of our briefings. This is so we can collate all relevant questions and publish responses all at once. Alternatively, if the question is super unique, we have collected your emails as part of the registration and we'll contact you directly with a precise answer.

Another important element of the housekeeping is letting you know that this session is being recorded. A copy of both the recording and the PowerPoint plus a transcript will be loaded onto the VCAA's F-10 resources webpages under the professional learning section. A copy of the recording and PowerPoint will also be emailed to participants in the coming days.

There are four parts to today's presentation - an overview of the revision and familiarisation of the Victorian Curriculum F–10, which will be presented by Jason Smallwood, Executive Director, Curriculum Division at the VCAA; the Revisions to the Mathematics curriculum, which will be presented by Michael MacNeill, the Mathematics Curriculum Manager; then familiarisation, which will be presented by me. Finally, we have a dedicated question and answer time where we'll respond to as many of the questions provided as we possibly can. These will be directed to specific aforementioned presenters as well as Gerard Martin, who is the Director of Curriculum Revision.

I'll now hand over to Jason to do the first section.

**[Jason Smallwood]:** Thanks Leyna, and welcome everybody.

Thanks for joining us today, this afternoon, and to learn more about the Victorian Curriculum F-10 Mathematics Version 2.0, which we're really proud to present to you.

As a primary school teacher, a few years ago now, a school leader, a principal, I know primary schools are very busy and are very dynamic in their environments and in their communities. I live with two primary school teachers as well in my home, and so I definitely know that this is the case still and I definitely appreciate your time that you have come today to learn more about Mathematics Version 2.0.

I thought it would be good just to give you a bit of an insight into what our organisation, our statutory authority does at the VCAA. Just to give you a bit of context. We're primarily accountable to the Minister for Education and we serve all sectors within the education systems. So we serve both government schools and non-government schools, our Catholic sector and our independent sector.

What we do is we design and develop and evaluate curriculum and assessment products and services for schools to take on board, and we develop a whole range of these frameworks and curriculum documentation from birth right through to 18 years plus.

So some of you may be familiar with the Victorian Early Years Learning and Development Framework, birth to eight years old. You'll also be familiar with Early Years Assessments. That's available through the VCAA on DAL. You'd also be definitely familiar with the F-10 curriculum and the assessments associated with that, and also you would be aware of the VCE components that we develop and design here at the VCAA as well as a reform piece that's happening across our system with our VCE Vocational Major and our Victorian Pathway certificate as well. So pretty much looking after curriculums and assessment, as I said, from birth up to 18 plus.

In terms of VCAA ‘curriculum’ means the course design element, it includes the content, the support materials, and other learning resources to support schools and early childhood centres in their work.

And the reporting and the pedagogy sits outside the remit of the VCAA. We know that they're important elements of what a good teaching and learning program looks like, but they are the sector responsibilities and depending on what sector you come from, there'll be some definite guidelines as to what that looks like in your school setting.

In terms of the revisions, I just wanted to take you through a bit of the work that we've been doing with the F –10 revision work.

As you know, the VCAA embarked on the revision to the Victorian Curriculum midway through last year, and the revisions to the curriculum that we've been making are based on the feedback of Victorian educators, and we've gained that feedback from a range of different ways. We've been formally monitoring the implementation of our current Victorian Curriculum over the last four years, and a lot of the information and the responses that we've gained from that formal monitoring has assisted us in this revision process. We've leveraged off some significant consultation that's been conducted by the Australian Curriculum and Assessment Reporting Authority (ACARA) when they have reviewed the Australian Curriculum F –10, and we've also gained advice that has been provided to us by Victorian teachers across various sectors. In this process, we've been able to gain the help of 250 Victorian primary and secondary teachers across Victoria and across the different sectors, and they've supported us over the last eight months in this particular work, and their advice has been valuable and has contributed considerably to the revision process.

So I would like to thank everybody that's been involved in providing us with that feedback over the last number of years.

In terms of our objectives on this slide, these are the things that have guided us in terms of our work. We really want this Victorian Curriculum to be more teachable, to be manageable, to be clearer. We really want content descriptions to be clear, that teachers regardless of what level you are teaching or what your confidence level is, or how long you've been teaching, or whether you're an out-of- field teacher teaching a particular concept, that the content description really is clear and you understand that, that the achievement standards are also as clear and as connected to those content descriptions, and that there is a real continuum of learning across those levels.

We want to make this particular curriculum easier for schools and teachers to familiarise themselves and to make more efficiencies and to be able to provide supports when teachers are planning high quality teaching and learning programs for the particular context that's within their school setting.

And additionally, the VCAA will be publishing and has also published support materials and resources and templates and exemplars, and we'll be doing that iteratively throughout this particular process.

Finally, the revisions will ensure that there is a sequenced learning journey from birth to 18, as I've said, and the F –10 Curriculum being a fundamental cornerstone in that transition from Victorian Early Years Development Framework, right through the F –10 Curriculum and into our senior secondary pathways.

We're definitely in a great position in 2023 and '24 and 25 is that we are looking at all levels of learning across that timeframe, and it's really great to be able to ensure that we connect each in a seamless way.

In terms of what's not changed, we thought that this would be something that is important to understand.

The overarching structure of the Victorian Curriculum is organised around learning areas, capabilities and cross-curriculum priorities. This has not changed.

We also continue to value and promote the importance of the disciplines throughout the curriculum, and we will continue to offer particular unique curriculum such as the EAL and such as the A to D curriculum throughout the next little while. On this, the A to D curriculum is very unique to Victoria, as you would know, and therefore it wasn't subjected to a national review like the Australian curriculum was. And so therefore, because we in in Victoria really value the importance of this curriculum to support students who have significant learning difficulties or intellectual disabilities, additional learning needs, to support students, we will be looking at reviewing this particular curriculum for schools. So therefore, the VCAA will be engaging in a rigorous process and engagement with this community of schools and teachers and students to ensure that this curriculum meets the needs of these students into the future and supports teachers in their work with students. So in the meantime, schools and teachers can continue to deliver the current A to D curriculum in their school settings.

Teaching and learning and assessment and reporting, as you know, are the key components that schools plan for and the requirements for reporting are set by the sector authority. So if you're in a Department of Education school or a Catholic Diocese school or an independent school, your requirements may be different. So we ask that you please speak to your relevant sector authorities and get the advice from them as to what the reporting looks like during this transition into the Victorian Curriculum Version 2.0.

In terms of familiarisation and what that might look like from a timeline point of view, you know that the F–10 Version 2.0 Curriculum and some supporting resources have now been published on our website.

And you may all be aware that the Department of Education and Catholic Commissioner of Victoria have indicated to their schools that schools can start implementing from 2024 with full implementation from 2025.

Irrespective of when your school chooses to implement Maths Version 2.0 at your school, the VCAA will be here to support you with multiple resources, with a really strong professional learning program.

We can also provide supportive advice on the Maths curriculum and what that might look like for your school.

So that's my section of the webinar, but I'll hand back to Leyna and she'll introduce Michael. He'll be able to tell you more about the improvements to our Maths Curriculum Version 2.0. Thank you.

**[Leyna Buller]:** Thank you, Jason.

I'm going to hand over to Michael MacNeill, our Curriculum Manager for Mathematics, and he'll take you through some key ideas and changes for the F–6 curriculum.

**[Michael MacNeill]:** Thank you Leyna. And thank you everyone for taking the time out of your day after a busy day. It's always great to see the dedication that the teachers bring to the practice of teaching.

We're very excited to present the Maths Curriculum Version 2.0 and we do believe that it does represent a genuine step forward for a curriculum that will assist students to really connect mathematics ideas with their life and to build a genuinely positive disposition towards the subject.

My intention today is to present information, which would be helping to facilitate teachers who are in the classroom and the focus is intended to be in that space. And obviously there's a level of granularity that I will be able to head down to and hopefully I'll be able to cover a lot of bases in terms of information you might want to know about.

If you have questions, please, pop them into the Q&A section.

The Mathematics Curriculum Version 2.0 provides opportunities for students to engage with essential knowledge and skills that were present in Version 1.0 and with enhanced connections to the real world experiences.

I think it's with a level of reassurance that I can offer to you around the expertise of the feedback that was provided by the panel as we examined the revisions to the Mathematics curriculum. There were people involved from academia. There were people from primary and secondary spaces. There was the subject association, the Maths Association of Victoria were involved. There was involvement from all sectors and the feedback, and the depth and the experience was enormous and the enthusiasm was great.

So the curriculum that we were able to present to you, again, we believe that to be a genuine step forward for the students of Victoria.

Some of the improvements are that it provides a simplified and more manageable structure. It embeds the proficiencies that were in the current Victorian Curriculum may have required some inference from teachers and now are very present in the wording of the content. There's a reduction in ambiguity there. There's greater scope to make connections across the Mathematics curriculum in terms of the other strands. I'll talk about them very shortly. And that promotes teacher agency in selecting content that they can connect across the strands and really tailor what their learning programme is to the cohort of students that are in front of them. There are clearer content descriptions and better aligned achievement standards that support learning and assessment. There are alignments that have occurred in terms of contemporary testing, NAPLAN and TIMSS come to mind in terms of where the content is placed. We'll talk to them shortly as well. And it's a future facing curriculum with a broader range of opportunities to utilise digital tools, while still retaining an emphasis on written and mental strategies. There's improved and streamlined sequencing of concepts and stronger links across the strands. And this supports teachers in their own agency in exploring innovative connections, but without losing the previous and historic connections that they know about and that are familiar to them as well. And there's a stronger alignment with VEYLDF and which is particularly for the primary space and also with senior secondary to provide that continuum of learning that Jason was mentioning earlier.

Some of the structural revisions that you will see as you read the document, you'll notice that the Rationale and the Aims, the Learning In and everything in the introductory section has been changed and improved upon to make it clearer, to provide those details that will really ground the subject for teachers who are new to the topic area and for teachers who are out-of-field. There is the content being now organised under six strands. Level descriptions - there's greater detail about the content and the skills and the expected outcomes at each level. The achievement standards and the content descriptions - clearer articulation.

One of the calls from the teachers of Victoria was, we want to have a curriculum which is clearer, and this curriculum as I'll show you, as the slides progress, it is a clearer curriculum and ambiguity has been removed from it.

And the elaborations, there are more examples that are there to empower teachers in terms of how they want to engage with the content with their cohort.

So at F–6, some of the things that you are going to notice as you read, is that at F–2 there are five content strands now. Probability commences at Level three. And this removes some or creates some space in the curriculum for students to consolidate those foundational ideas and skills.

There's an increased emphasis on mathematical modelling and statistical investigations for a few reasons. Research supports the increased embedding of ideas through the engagement of teachers with mathematical modelling, that real world application of mathematics, but not just a real world application, but an extra layer of analysis really. Students evaluating what they were doing, how they were doing it, and why it works and how it might be improved upon.

It promotes teacher agency in selecting those real world contexts. Teachers know the students in front of them, they know what their interests are, and by selecting interests that are with the students for the mathematical modelling or statistical investigations that connection is going to be deeper, and it allows students to draw those connections together in a clearer fashion.

There's an increased prominence of the computational and algorithmic thinking with wider opportunities for students to engage with this as their confidence grows.

We have a diagram here that illustrates very clearly the connections that can be seen through the elements of the new curriculum form.

I want to speak briefly to the aims of the Victorian Curriculum for Mathematics. This speaks to the ‘why’ we're doing what we're doing and what we want to see for our students as a result of their engagement with the curriculum.

Obviously, they need to develop useful mathematical and numeracy skills to engage with a world which is rapidly changing, but not just to engage with it, but to be critical of what's going on, so that they can become confident, proficient, effective, and importantly adaptive users of mathematics. We need them to be effective communicators. We want them to be able to investigate, represent, and interpret those situations and to develop proficiency, develop mastery, and pose and solve those problems.

They need to make connections between the mathematics, the abstract areas, and to apply mathematics to model situations in various fields and disciplines, to adopt a mathematical mindset and judiciously select that as they need to when they're presented with situations in their life that may be best solved through a mathematical mindset, but also to be able to decide when a mathematical mindset might not be the appropriate approach. And through this, to develop a positive disposition towards the subject and recognise it as accessible.

And finally, to appreciate mathematics as a discipline and the depth of the history, ideas and the philosophy of mathematics.

One of the key changes that has occurred is the decoupling of the strands. They're still very familiar. There's still Number and Algebra, Measurement, Geometry has become Space and Statistics and Probability. And there are familiar connections that teachers would know about and from where the strands were coupled together. However, there are now opportunities for teachers to connect content across multiple different strands. Number and Space for instance, or Algebra and Probability or Measurement and Number or Statistics now, any combination of the two. To provide opportunities again for teachers and agency for teachers to make that selection of developing and exploring connections with their students as their students come to know the subject.

While I've spoken about the connection across new combinations of strands, that doesn't mean that familiar combinations can't be explored. So while the provision for different strand combinations is there, where sensible combinations exist, teachers can still continue to utilise them. And here's an example where concrete number connections can still be used to help students to understand operations and extend the patterns that they observe emerging from those concrete numerical interactions.

The alignment of the content descriptions and the achievement standards. We believe that there are clearer connections now and that emerges through the writing and the reading of those content descriptions against the achievement standards. We provided here an example from the current curriculum where the focus of the work in the revision was to really increase that connection and the obviousness of the connection. The reading of the Version 2.0 Level 4 Algebra content description and the corresponding achievement standard will demonstrate those clearer connections between the content and the achievement standards.

The achievement standards also represent a continuum of learning and that continuum of learning becomes manifested through the content descriptions and the connection can be there horizontally across the same strand, within the same strand. However, also connections can appear vertically to facilitate the development of learning programs. And those ideas may be seen as a through line across the levels and provide support for students to engage either at the level that they're at and clearer connections to provide scope for students to engage above and below as is needed.

The scope and sequence are outlined in the resource document that has been developed. There are two documents that are contained where teachers can read the F–6 curriculum and then the 7–10 curriculum as a scope and a sequence of the ideas underneath each of the strands. And these connections can be seen to provide or to allow teachers to easily track the ideas as they become increasingly sophisticated from F–10.

The scope and sequence for statistics across Levels five to eight. I've presented this as an example when we look at statistics, the sophistication increases across those levels. And this is just as an example of how that sophistication for this particular idea increases and may be seen in in other notions that appear at the different levels.

I'd like to speak a little bit around some of the interwoven processes that you're going to see. The proficiencies remain in place – Understanding, Fluency, Reasoning and Problem-solving. The content descriptions being clearer. The connections with digital tools and the promotion of the idea within students that they can make that selection of reaching for digital tools, whatever that happens to be as is needed, but also recognising the value of mental arithmetic and written communication for their mathematical working. And those key skills of mathematical modelling and statistical investigation are woven far more prominently into the curriculum.

I want to talk a little bit about those mathematical proficiencies. In particular, identifying them as the ‘what’ and the ‘how’ of mathematics in action. They should be familiar to teachers having been present for the Victorian Curriculum Version 1.0 and the intention of the panel in the development of the revised curriculum was really to make these feature more prominently in the reading of the content itself. And so an example of that is here where in the left column we've got the current Victorian Curriculum for which the proficiencies of understanding may initially be obvious or perhaps fluency through the verb ‘investigate’. And then the rewriting of the corresponding content description, which you can read on the screen there. ‘Understanding’ can be represented through additive situations as it historically has been. ‘Fluency’ is present in calculation strategies. ‘Reasoning’ is required for mathematical modelling and ‘Problem-solving’ is literally written into the content description. And in that sense, they have been made clearer.

Computational thinking, it's a topic or a component of the curriculum that I frequently get asked about and potentially more frequently at the VCE level and at the high school level. And it has been present in the curriculum from F–10 and F–6 more particularly for this particular presentation, from the writing of the previous curriculum. It was recognised as a beneficial structure by ACARA as they approached their revision and was a component of the Victorian Curriculum that was written into the Australian Curriculum. And it doesn't necessarily represent coding and we need to be very clear about that. And so while, it may involve coding, if you as a teaching group would decide that it is appropriate for that, it really is a mode of thinking, and those key elements of decomposition, pattern recognition and abstraction is the breaking down of a problem into something that can be engaged with in terms of mathematics. Where algorithmic thinking can then be engaged to employ a particular mathematical process that will deal with the problem, generate a solution, and then students can evaluate that solution. And so computational thinking, it does readily lend itself to the mathematical modelling, however, it doesn't necessarily have to and it doesn't necessarily involve coding. However, again, if you wish to do so, it may. And again, we're providing agency for teacher or scope for teachers to develop their agency in employing what methods are going to work with their students.

Mathematical modelling. I want to talk a little bit about this and there's plenty of information on the slides. However, I want to break down the idea and take most of the details out of it in that it's supposed to be a cyclic scheme. It's supposed to involve a real world situation. It starts as a real world situation, where students take that situation and look for the mathematics in it, decompose it, and start looking for patterns that may be there or at least identifying information. Applying a preselected mathematical model that will develop a solution and then students should be evaluating that particular solution.

A mathematical modelling cycle like this can be engaged with once around the cycle or as teachers you may decide to move more than once around the circle, two or three times as students refine their model. But again, that's a decision for teachers to make as they move forward or as they engage with it.

Now the mathematical modelling contexts, contexts are presented in the elaborations for the content descriptions, and there are many different elaborations for each of the mathematical modelling content descriptions. Now they provide a starting list for scenarios where teachers might want to present this scenario to students. They're not an exhaustive list and teachers should absolutely feel empowered to discover a new situation if they want to present their own situation, if they have one that's appropriate to their cohort. And again, engage with the students themselves. Find out those niche areas of interest and utilise those to really engage students with mathematics as it pertains to their world.

With statistical investigations, very similarly, there is a structure to statistical investigations that involves the posing of an appropriate question, after students have learned to understand what data types are. And again, there are many examples of those statistical investigations that can be utilised by teachers for the students within the elaborations. But again, the elaborations are not mandatory. Students don't have to cover them all. And if teachers have got a different context in mind, absolutely, please engage with that. The idea here and the intention behind this part of the curriculum is very deliberately to create the opportunities for teachers to engage mathematics for their students and with their students.

One of the support documents which has been developed is a comparison of the two curriculums. And they present a side-by-side comparison with very short comments and explanations of why things have occurred and at what points they have occurred.

I want to talk about a few things here across the next few slides. Content consolidation, where some of the content descriptions have been reduced in number, but the ideas have been coalesced; where new content might have appeared; and then where content has been realigned and how teachers may wish to address that.

So an example of content consolidation, where in the left hand column we have had some disconnected but not disparate ideas, or disparate but not disconnected ideas, across multiple content descriptions where a more streamlined learning can be achieved for the students if those ideas are collected together.

An example of where new content has been generated is where, and we've chosen Probability here, I'll talk to that shortly.

I have mentioned previously that Probability does commence at Level three and so the content descriptions have been rewritten in a manner that allows students to engage with those notions of randomness and chance, at a time when their development within the subject and their own life experiences will permit them to be able to really connect with those ideas and understand probability as a means of applying measurement to randomness and chance.

There have been times when content has been realigned upwards in levels and here we see an example of where some content has been shifted from Level four into Level five. This isn't the only example and this doesn't present necessarily an issue as students in Level four will proceed to Level five and they'll encounter that particular content. They'll have an experience with that particular content.

So all we want to be able to identify here is where some content has been realigned downwards in level. Here we have an example where content has been moved from level three to level two, which introduces that careful consideration where students currently in Level two may move up to Level three, whereas the content is moving from Level three down to Level two, and that needs to be carefully considered as teachers develop the teaching and learning programmes within their school. And for some of these concepts, they'll need to be taught at both Level one and Level two in order to ensure that students encounter these concepts.

And I'll pass back to Leyna at this stage.

**[Leyna Buller]:** Thank you Michael.

As I mentioned earlier, my name is Leyna Buller and I'm the Senior Policy and Strategic Advisor for the F–10 Revision Project and I'm here to speak to you regarding familiarisation for the Victorian Curriculum F–10 Mathematics Version 2.0.

When we use the term familiarisation, I just want to note that this encompasses both professional learning as well as support materials and artefacts.

Although this webinar and the series we have curated will provide a really solid foundation for teachers and leaders to access and engage with the curriculum, the VCAA is planning for mid to late term four to provide a learning module that will delve deeply into the Victorian Curriculum F–10 Mathematics Version 2.0.

You can see an example of what the topics within this module or the chapters within this module will look like on the screen in front of you. You'll note that this module has been broken down into different chapters so that the end user can pick and choose their learning journey and cater their learning to the needs that they're experiencing at any specific time. We've further individualised this module for different audiences from leaders to teachers and then again for primary and secondary schools. We acknowledge that although there are some similarities in the needs between all of these different groups, we also know that they all have some specific needs that need to be addressed if we are to support teachers to engage students and provide a learning environment that ensures they receive their learning entitlement.

This module will be accessible through a learning management system that will allow the user to enter in and out of chapters as they need, and pause, come back in and still have their progress.

Professional learning is a critical element of familiarisation, but it requires additional tangible artefacts to be as effective as possible. In order to support schools with the revisions to the curriculum that Michael outlined earlier, we have already published a number of supporting resources. These have been targeted at teacher's initial engagement with the curriculum such as the scope and sequence documents and the comparison of curriculums document that Michael references and talked about how to use.

Next week we will publish exemplar assessment tasks that illustrate how achievement standards can be translated into meaningful assessment. There are two examples for Levels F to six and an additional two examples for Levels seven to 10.

The construction of these support resources or this specific support resource has occurred as a consequence of direct feedback from educators, indicating this is an area where they would appreciate additional guidance and modelled examples.

Next term, the supporting artefacts are diving deeply into curriculum area planning, which includes templates, exemplars, guides. These are different in their design in that they're trying to support schools, teachers, leaders to consider the curriculum holistically and to cohesively plan for that initial engagement of implementation, which could be in 2024 for some schools and could be in 2025 for some others.

It would be remiss of me not to mention a Digital Assessment Library, which is free for all Victorian schools and provides a platform where there's over 137 mathematics assessments available to you. The content will be progressively released commencing Term one, 2024. So if you are a school that is looking to implement for next year, there will be resources available to you and it will be iteratively updated over the course of 2024 ready for 2025. You can find out much more about the DAL on the VCAA website and the link is there and it will be sent out in the PowerPoint when you receive it.

In order to support your engagement, the Victorian Curriculum F–10 Mathematics Version 2.0, these links are also really helpful - our website, where to find the curriculum and just general information about the revision.

To be notified in an ongoing way by email, it would also be really useful to sign up for the Victorian Curriculum F–10 update. It includes new resources, professional learning opportunities, and any new information comes via that source. So if for whatever reason you didn't access the notice or the bulletin, it would also come out here. So it's a really good way of making sure that you stay up to date.

If at any time you require specific support or have inquiries, please feel free to contact the F–10 Revision team on this number and email address. We will endeavour to get back to you as soon as possible.

That's the end of the formal presentation.

We now have some time to respond to some questions that have been asked. We only have limited time, so about 13 minutes to respond to these questions. Please be reassured, as I mentioned earlier, we are collecting all questions asked and if we do not respond today then as I previously mentioned, we will be publishing an FAQ document, post all of the briefings. This will respond to the questions that we are receiving most often. That includes questions we might have received over and over again via our email that I just mentioned. So we're trying to be as responsive and give you all of the information we possibly can.

If the question is quite specific, we've gathered your email addresses as part of the signup to this session and we'll respond to you directly. They might be too specific or context specific for everyone and we want to make sure that we get back to you.

As I mentioned earlier as well, I'll direct the questions to who it might be most appropriate to on the panel. So we'll start with a question for Gerry.

So content framed by play and exploration-based learning for Levels F to two responds to contemporary research in how children learn effectively. What research is this? Can you please provide the research that has been consulted and used to build these elements of the new Mathematics curriculum?

**[Gerry Martin]:** Good afternoon everyone.

My name's Gerard Martin. I'm the Director of the Curriculum Revision.

Fantastic question to ask. Play and exploration are important components of children's learning. And development in early childhood, which in Victoria defines the period from birth to eight years old. The extensive body of researchers that supports these approaches is synthesised into the Victorian Early Years Learning and Development Framework or VEYLDF as it's commonly known.

For all professionals working with children and families in the birth to eight period, including the early years of primary schooling, and particularly that Foundation to Level two, we've gotten overlap with the VEYLDF.

While these approaches are relevant to all learning areas and capabilities, specific research has also addressed their relevance to mathematics, particularly "Play and Mathematics" by leading early childhood academics, Bob Perry and Sue Dockett. This is an example of the kind of research that underpinned development of the VEYLDF and which remains relevant to teachers interested in building their understanding of play and exploration in delivering the Mathematics curriculum.

For those of you interested in play-based learning and or the Victorian Early Years Learning and Development Framework, VEYLDF and teach foundation to Level two, I really strongly encourage you to visit the Early Years page on the VCAA website, which has immense number of resources, fantastic resources that are extremely useful for primary teachers, particularly those in Foundation to Level two.

**[Leyna Buller]:** Thanks Gerry. My next question is for Michael.

Michael, how will the changes to Probability at F–2 impact NAPLAN?

**[Michael MacNeill]:** Great question. And an important question.

The simple answer, it won't. It shouldn't affect it at all.

The current requirements for NAPLAN addressing statistics knowledge with some elements of comparisons of frequency and not the ideas behind randomness and chance that are the content of the probability strands. It's also important to note that the content within the curriculum has been positioned to prepare students so that the ideas that they would be tested on in NAPLAN, they will have experienced in the curriculum at the appropriate levels.

**[Leyna Buller]:** Thanks Michael. Our next question, I'm going to direct to Gerry.

What do schools use to replace the A to D levels, particularly in a special setting?

**[Gerry Martin]:** Another great question.

Most students with disabilities and additional learning needs can engage with the Math Curriculum Version 2.0 provided the necessary adjustments are made to the complexity of the curriculum content pedagogical practises or methods of assessment.

For a small percentage of students with significant disabilities and additional learning needs, their learning will be well below the Victorian Curriculum Foundation standards. Most of these students have a significant intellectual disability. The A to D Curriculum is a curriculum specially for these students. A to D provides this cohort of students with access to curriculum content and standards that enable them to move towards the learning described at Foundational level.

The A to D Curriculum is unique to Victoria and therefore was not subject to the national review.

Victoria values the importance of this curriculum for students with significant intellectual disabilities and additional learning needs. Therefore, the VCAA will be engaging in a rigorous process of review and engagement with this community of schools, teachers and students to ensure that this curriculum continues to meet the needs of the students and into the future.

In the meantime, schools and teachers who cater for students with significant intellectual disabilities and additional learning needs can continue to deliver the current A to D curriculum in Mathematics.

**[Leyna Buller]:** Thanks, Gerry. I’m going to ask you the next question too.

There have been a lot of questions about reporting, particularly with the change to the six strands. Could you comment on that please?

**[Gerry Martin]:** Great question again.

As already mentioned in the presentation, sectors are responsible for reporting as Mathematics Curriculum Version 2.0 has only just been released. The various sectors will be providing greater advice to schools in their sector around what they will be doing in relation to reporting from implementation next year and into 2025.

**[Leyna Buller]:** Another one for you.

What is the relationship between the numeracy capabilities, progressions and mathematics?

**[Gerry Martin]:** In the Victorian Curriculum F–10, the knowledge and skills that underpin numeracy are explicitly taught in the mathematics six strands. However, numeracy is distinct from mathematics. Numeracy is the student's ability to develop the knowledge and skills to use mathematics confidently across learning areas at school in a wide range of situations and in their everyday lives.

So the Victorian Curriculum F–10 Version 2.0 will provide the numeracy capability as a resource that will allow all schools to reflect on opportunities to embed numeracy in student learning across all curriculum areas, not just Maths.

We'll also be providing additional resources in this space as we've move through implementation.

On the literacy and numeracy progressions, but more specifically on the numeracy progressions, the Australian Curriculum Assessment and Reporting Authority led developing those new numeracy progressions and literacy progressions a number of years ago and numeracy was revised and published back in 2020. What's important to remember is they are first and foremost a supporting resource for teachers. The literacy and numeracy progressions are not an alternative curriculum. They do not specify the curriculum, nor what to teach or report against.

The mathematics achievement standards and content descriptions continue to be the focus of planning, program teaching, learning, assessing and reporting against the Victorian Curriculum F–10 Mathematics.

The literacy and numeracy progressions are a resource to support teachers to understand how aspects of numeracy and literacy develops over time and to use them to inform the development of learning activities to support teachers to understand individual students' literacy development or numeracy development within independent curriculum areas. And they can assist teachers in developing the targeted learning and assessment practises or programs.

**[Leyna Buller]:** Thank you. I'm going to respond to a couple of the questions regarding familiarisation materials that have been asked, specifics around when the modules will be released.

The modules will be, or the module with the chapters will be released mid to late term four. There's editing to take place and videos to be undertaken so a more specific date can't be provided just yet, but it will be in term four.

In terms of the other familiarisation materials, the assessment tasks will be available that are mapped to achievement standards next week and the more broad planning materials will be available, the start of term four, so the first fortnight of term four.If you have signed up for the F-10 update, we will be sending emails out as things are iteratively released. So that's a really good way of knowing pretty quickly when something new and exciting has been placed up there for you.

My next question, and I suspect probably the last one given that we are getting so late in time is actually for Michael.

The new version is fantastic. I was wondering about the influence of Dianne Siemon's big ideas of mathematics which are now much more consistent with the curriculum. Did this play a significant role in the development process? Are you considering using Top Ten Mathematics unit plans as a support resource for the new curriculum as it would appear to me to be the most heavily aligned to the new curriculum? For instance, the multiplicative focus on strategies, double-double.

**[Michael MacNeill]:** I'll commence with addressing the first part of the question.

Dianne Siemon's research is well known in maths teaching circles and the identification of those key linchpin big ideas as they were badged and the kinds of the foundational connection that they provide to students learning and the progression through maths ideas as they become increasingly sophisticated. One of the answers is yes. The big ideas were a consideration for the development of the curriculum. And so the concept of the idea was utilised to inform the positioning of content in terms of both knowledge and skills and the reinforcement through the mathematical modelling and the provision of scenarios where teachers can engage with some of those ideas.

In terms of in-class resourcing and specific in-class resourcing, that would be at the discretion of the teachers. However, certainly the concepts behind the big ideas were used in the development of the curriculum.

**[Leyna Buller]:** Thank you.

And that brings us to the end of the time we have for our question and answers and the larger presentation today.

Thank you again for your attendance. We hope you've taken away a lot from this session.

As mentioned earlier, the recording of today's webinar and the PowerPoint slides will be emailed to you all within the next coming days. In the meantime, for links to resources and other information mentioned today, please look at the chat box.

The chat and Q&A box will stay open for a short time post this, should you have any last-minute questions or comments that you would like to make, particularly if you would like us still to respond to something, if it has already been placed in the Q&A box, we will get back to you or it'll be placed in the FAQs that we will publish post this point.

Finally, we really value your feedback from this afternoon's presentation. Part of the reason we're producing some of the familiarisation resources that we are is as a direct consequence of the feedback we have received from teachers. So we would really appreciate if you could take a moment post this session to just give us a little bit of feedback on today and any thoughts that you may have. We take it really seriously. This is an important relationship to us.

Thank you again and enjoy the rest of your day and have a lovely evening.

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